

REMARKS

Claim 27 has been canceled and new claim 36 has been added.

The Examiner rejected claim 2-7, 9-13 and 27-35 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner rejected claims 2-4, 11, 33 and 35 under 35 U.S.C. §102(b) as allegedly being anticipated by Matsusaka et al. (US 4,959,510).

The Examiner rejected claims 2, 6, 7 and 27 under 35 U.S.C. §102(e) as allegedly being anticipated by Murakami et al. (US 6,031,292).

The Examiner rejected claim 5 under 35 U.S.C. §103(a) as allegedly being unpatentable over Matsusaka as applied to claim 2 and further in combination with Frey et al. (US 5,249,101).

The Examiner rejected claims 12, 13 and 34 under 35 U.S.C. §103(a) as allegedly being unpatentable over Matsusaka as applied to claims 3 and 11 and further in combination with Lee et al. (US 6,050,832) and Lan et al. (US 5,767,575).

The Examiner rejected claims 9 and 28 under 35 U.S.C. §103(a) as being allegedly unpatentable over Murakami as applied to claims 2 and 6 and further in combination with Sherman (US 5,784,262).

The Examiner rejected claims 10 and 29 under 35 U.S.C. §103(a) as allegedly being unpatentable over Murakami and Sherman as applied to claim 9 and further in combination with Tamaoki (JP 02-43748).

The Examiner rejected claims 30-35 under 35 U.S.C. §103(a) as allegedly being unpatentable over Murakami as applied to claim 6 and further in combination with Smith (JP

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Applicants respectfully traverse the §112, §102, and §103 rejections with the following arguments.

35 U.S.C. §112

The Examiner rejected claim 2-7, 9-13 and 27-35 under 35 U.S.C. §112, second paragraph, as allegedly "being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to claims 2 and 3, it is unclear how circuit lines can be "totally external aside from being in contact with substrate." The sentence with the word **aside**, in scope, includes an area of the line that is in the substrate and therefore not "totally external" from the substrate."

In response, Applicants amended claims 2 and 3 to clarify the invention, and the Examiner has agreed in a telephonic interview on March 20, 2003 that the language of amended claims 2 and 3 overcomes the U.S.C. §112, second paragraph rejection.

35 U.S.C. §102

The Examiner rejected claims 2-4, 11, 33 and 35 under 35 U.S.C. §102(b) as allegedly being anticipated by Matsusaka et al. (US 4,959,510). In the rejection of claims 2 and 3, the Examiner identified reference numerals 4, 2b, and 3 in Matsusaka as respectively representing the first circuit line, the second circuit line, and the third circuit line of claims 2 and 3.

In response, Applicants respectfully contend, however, that reference numeral 4 represent a bonding pad and is called a "bonding pad" in Matsusaka, and has the functionality of a bonding pad in Matsusaka. Since claims 2 and 3 recite that the first, second and third circuit lines do not consist essentially of a conductive pad, the bonding pad 4 in Matsusaka cannot be considered to be a circuit line that is applicable to claims 2 and 3. Accordingly, there are only two applicable circuit lines in Matsusaka, namely circuit lines 2b and 3. Since claim 3 recites three circuit lines having different thicknesses, Applicants respectfully maintain that claim 3 is not anticipated by Matsusaka. Since the circuit lines 2b and 3 do not satisfy "wherein the first circuit line physically touches the second circuit line in direct surface-to-surface contact", as required by claim 2, Applicants respectfully maintain that claim 2 is not anticipated by Matsusaka. Based on the preceding arguments, Applicants respectfully maintain that Matsusaka does not anticipate claims 2 and 3, and that claims 2 and 3 are in condition for allowance. Since claims 4-5 and 9-13 depend from claim 2, Applicants respectfully contend that claims 4-5 and 9-13 are likewise in condition for allowance. Since claims 6-7 and 28-36 depend from claim 3, Applicants respectfully contend that claims 6-7 and 28-36 are likewise in condition for allowance.

The Examiner rejected claims 2, 6, 7 and 27 under 35 U.S.C. §102(e) as allegedly being anticipated by Murakami et al. (US 6,031,292). In the rejection of claim 2, the Examiner identified reference numerals 3 and 6 in Murakami as respectively representing the first circuit line, and the second circuit of claim 2. The Examiner also viewed the first circuit line 3 and the second circuit line 6 as being in direct mechanical contact via the plated through hole 4 in Murakami.

In response, Applicants respectfully contend that Murakami et al. does not anticipate claim 2, because Murakami does not teach the feature: "wherein the first circuit line physically touches the second circuit line in direct surface-to-surface contact." The coupling of the first circuit line 3 to the second circuit line 6 via the plated through hole 4 in Murakami does not satisfy the preceding feature of claim 2. Based on the preceding arguments, Applicants respectfully maintain that Murakami does not anticipate claim 2, and that claim 2 is in condition for allowance. Since claims 4-5 and 9-13 depend from claim 2, Applicants respectfully contend that claims 4-5 and 9-13 are likewise in condition for allowance.

35 U.S.C. §103

The Examiner rejected claims 5, 9-10, 12-13, and 28-34 under 35 U.S.C. §103(a). Since claims 5, 9-10, and 12-13 depend from claim 2, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claims 5, 9-10, and 12-13 are not unpatentable under 35 U.S.C. §103(a). Since claims 28-34 depend from claim 3, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claims 28-34 are not unpatentable under 35 U.S.C. §103(a).

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below.

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